GRUMMAN plane news

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Display at KSC offers exciting, wide-angle view of future America

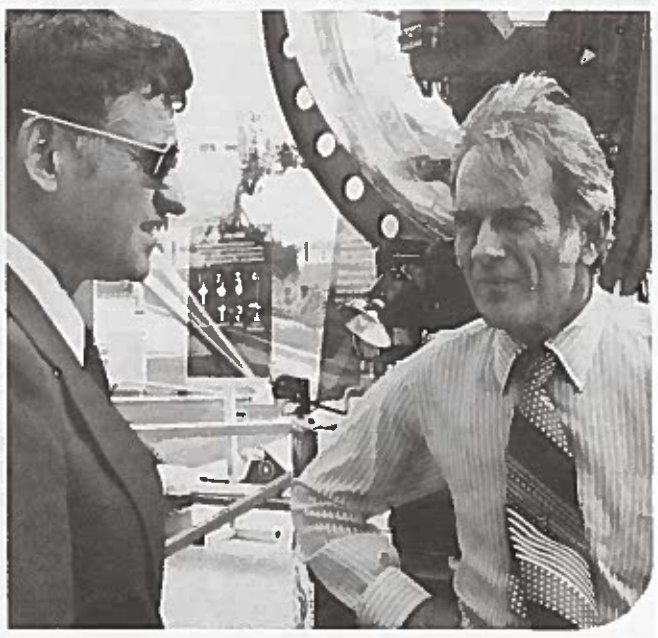
KENNEDY SPACE CENTER — Thousands and thousands of visitors from across this land and many other nations of the world are getting a preview of what the next century holds for future Americans at a giant bicentennial exposition on science and technology at this huge spaceport. The exposition, which opened for public viewing on Memorial Day, was officially dedicated on Monday, June 14, as representatives of the Federal government, industry, education, and the National Aeronautics and Space Administration gathered at Kennedy Space Center to mark the event. Among those invited and in attendance at the inauguration was George Skurla, Chairman and President of Grumman Aerospace, and formerly director of operations for the company at Kennedy Space Center during the preparation of this spaceport for lunar launches. Skurla headed the Grumman Lunar Module launch team at the Cape through the Apollo 11, 12, and 13 moon landings.

Visitors to "Third Century America" will get a fascinating glimpse of what awaits this nation in the decades ahead. The bicentennial exposition, which is in operation through early September, features exhibits that demonstrate United States' advancements in science and technology and the roles they play in improving the quality of life in America. The spaceport's Vehicle Assembly Building—largest in the world for total volume—has been transformed into a tomorrowland that relates scientific and engineering achievements to what could well form the basis of a future lifestyle for Americans.

'Horizons still unlimited'

President Gerald Ford, in a telephone call to NASA administrator Dr. James Fletcher who was at the ceremony, described the exposition as a means to "show Americans that our horizons are still unlimited and so is our capacity to reach for them."

(Continued on page 3)



Fun in the sun. Floridians and visitors to that sunny clime are in for a treat at Kennedy Space Center. On display until September 7 will be a bicentennial exposition on science and technology–the only one scheduled for '76 in the U.S.–that provides an exciting look at future America in such broad areas as medicine, space, home appliances, and construction. At the official dedication on June 14, a colonial color guard is depicted above, visitors to the Grumman exhibit (left) view models of more than 40 years of aircraft history, and (right) Board Chairman George Skurla (L) chats with Deke Slayton, one of the seven original astronauts whose trip into space was delayed until the recent Skylab series.

First STA embarks to NASA-Houston

A small crowd of well-wishers gathered outside the Plant 4 hangars on Tuesday, June 8, to bid farewell to the first Shuttle Training Aircraft (STA). Flown by NASA pilots Dave Griggs and Al Manson, the first of two modified Gulfstream II corporate jets was delivered to Ellington Air Force Base near NASA's Johnson Space Center in Houston. The second STA is slated for delivery in July.

Modified to simulate the Shuttle Orbiter's cockpit, motion and visual cues and handling qualities, the two STA's will duplicate the Orbiter's atmospheric descent trajectory from an approximate altitude of 35,000 feet to its runway landing. Direct lift flaps simulate the Orbiter's expected attitude and vertical control. Side force controls positioned under the wings were installed to simulate expected sidewards movement of the spacecraft.

Space shuttle astronaut training will begin in the STA aircraft on September 1. Several weeks ago NASA announced the four astronauts that will serve as space shuttle approach and landing test crewmen: Fred Haise Jr., USAF Lt. Col. Charles Fullerton, USAF Col. Joe Engle, and Navy Cdr. Richard Truly. An astronaut since 1966, Haise is no stranger to Grumman. During the 60's, he assisted in the development of the LM for NASA at Bethpage, and was lunar module pilot on Apollo 13 in 1970.

Pre-takeoff talk. Before the STA vehicle no. 2 took off for Houston, members of the Grumman team chat with NASA pilots (L to R) Charlie Huebner, Plant 4 Manufacturing foreman; Harry Schlimper, Plant 4 Inspection supervisor; William Gentzlinger, STA program manager; Dave Griggs, NASA pilot; Pete Gelpi, STA vehicle No. 2 manager; and Al Manson, NASA pilot. (Photo by Rich Breunig)

Grumman subcontractor captures national award

Arkwin Industries of Westbury, a Grumman subcontractor and nationwide supplier of aerospace components, has been named the National Small Business Subcontractor of the Year by the U.S. Small Business Administration (SBA).

The company that employs 250 people in six plants, was nominated for the award by Grumman, and was selected out of 10 regional winners from across the country by a panel of seven independent judges, representing private industry and the Federal government.

Since 1951, Arkwin has been designing and manufacturing hydraulic, pneumatic, and fuel controls used on aircraft and in aircraft engines—swivel joints, actuators, fittings and related test equipment. One example of Arkwin's exceptional performance cited by Grumman was the firm's ability to cut production time on the control module selector valve for the F-14 landing gear from 18 months to 11 months, with no increase in cost.

For the past nine years, the SBA has presented this award to help focus attention on small businesses, and their role in the defense industry, according to Charles W. Dunn, Grumman Small Business Liaison Officer. The SBA asks Department of Defense contractors to submit the names of their outstanding subcontractors to the committee, and this year, Arkwin was Grumman's only nominee.

From a group of about 26 other contestants, Arkwin was chosen one of 10 regional winners by a panel of impartial judges reviewing entry forms prepared by the nominating companies. In the past nine years, Grumman has had five regional winners, but Dunn pointed out that Arkwin is the first to gain national recognition.

Arkwin president Daniel Berlin received the national award May 12 at a ceremony in Washington, D.C. and company employees were honored June 4 in Westbury for their part in helping Arkwin gain national recognition. Besides the national award, the employees received an award from Philip Vassallo, Grumman Director of Corporate Procurement Operations, and from Martin Bass, SBA Assistant Regional Director for Procurement Assistance, who presented the company their Regional Subcontractor of the Year award.

With other 50,000 small businesses across the country, Dunn noted "this award is quite an honor for both Long Island, Grumman and the Arkwin employees."

Subcontractor honored. Dick Maniscalo (L), Grumman's supervisor of Airborne Equipment Procurement, who nominated Arkwin Industries for the Subcontractor of the Year award, presents Arkwin representatives Richard Korea (C) and Jerry Capobianco (R) with a Grumman award. (Photo by Bob Settles)

Bathroom safety

The National Safety Council says that many people are electrocuted in their bathrooms. Resting an electrical appliance on the back of a sink or tub where it can accidently slip or be bumped into the water is a common cause. Many people, mainly teenagers, have been electrocuted, while listening to the radio when it suddenly fell into the bathtub.

Flourish of bagpipes and drums marked entrance of Jordanian Army band during official opening of bicentennial show at KSC. Also on tap at future shows: the Navy's Blue Angels, Air Force Thunderbirds, and Army skydiving team.

Bicentennial display at KSC- a portrait of future America

(Continued from page 1)

Said the President: "This massive combined effort, planned and carried out by NASA, 16 other Federal agencies, and a number of corporations and institutes of higher learning, represents the same spirit of cooperation and mutual support that enabled Americans to venture from Cape Canaveral to the moon and back.

"The Kennedy Space Center is the fitting location for this exposition. In just 20 years it has become historic ground in the United States, as well as in the world. The brave astronauts of the Mercury, Gemini, and Apollo programs and their dedicated support teams represent the finest quality and technology.

"The space center and the fabulous story behind it has become a part of America's national heritage. More than just a story of technical expertise, it is the superb story of courage, perseverance, and strength of determination and of faith...."

Ford finished his message to those attending the ceremony by saying: "I hope and trust that thousands and thousands of Americans and those from other parts of the world will come and see for themselves what we have done and what we will do in the future."

'The Eagle has landed"

One of the most vivid and dramatic reminders of our conquest of space awaits those who tour the spaceport's Launch Control Center, where two firing rooms have been transformed into multi-screen theaters for the bicentennial exposition. In one, KSC director Lee Scherer outlines the Center's unmanned launch schedule and its benefits for U.S. citizens, discusses the Space Shuttle program, and then takes his audience back in time to those historic hours that preceeded the launch of Apollo 11, man's first journey to the surface of the moon.

A few steps away in a second firing room the years slip away until it is once again July 16, 1969...only a few minutes from blastoff of the Apollo spacecraft that would carry three Americans on an historic voyage, one that would rank among man's greatest achievements.

The firing room's operational displays and hundreds of consoles wink and blink with cascading lights as the countdown clock—tied in with the Apollo-Saturn sequencer—ticks off the final moments. In the darkened theater, photos and film clips flash on the screen, transporting onlookers back in time to those last, climactic seconds—astronauts methodically completing their launch routine; launch center activity, excited but controlled; the voices of the NASA launch team and the astronauts exchanging last-second data; and, finally, engine ignition, blastoff, and a liftoff into history.

At this particular showing on June 14 there were two onlookers who carried their own memories of that day. Deke Slayton, one of the seven original astronauts, was sidelined for health reasons during the Mercury, Gemini, and Apollo programs and didn't get into space until the last Skylab mission—11 years after NASA doctors had discovered a slight heart murmur.

Also looking on silently was Mike Collins, the Apollo 11 astronaut who never touched the surface of the moon. He circled the moon in the command/service module awaiting Neil Armstrong and Buzz Aldrin to complete their lunar experiments and pilot their Lunar Module to a rendezvous with the mother-ship he was piloting in preparation for a return trip to earth.

Grumman on display

"Third Century America" also features exhibits by 15 other Federal agencies, 10 leading U.S. industrial concerns—among them, Grumman, and numerous colleges and universities.

Exhibits are displayed in 15 geodesic domes, in the Vehicle Assembly Building, and the Launch Control Center lobby.

Another eyecatcher—make that eyecatchers—at the show are the huge American flag and American Revolution Bicentennial Administration symbol that adorn the VAB. And in the giant world of Kennedy Space Center, these symbols are truly gigantic. The American flag measures 209 x 110 feet and the revolutionary symbol is 110 feet in diameter. (Local residents take pride that one of their very own young ladies was the designer of the ARBA symbol that is displayed throughout KSC...and the entire U.S. as well.)

Visitors to the Grumman exhibit can view models of famous aircraft designed and manufactured by the company over the past four decades and composite structures used in the latest aircraft designs, displays of a solar hot-water heating system, a unqiue hypobaric storage and transportation system for perishables, and a recycling system capable of treating and extracting reusable elements from industrial waste. Future program studies include designs of a prototype solar power development laboratory and a satellite solar power station to harness the sun's energy for use on earth.

View of the future

And there are many, many fascinating glimpses of the future. Spinoffs from the space program are highlighted in four technology utilization theme areas—medical, transportation, recreation, and home—showing how these advances are now in use by industry to improve health, safety, and the quality of life in America. At one NASA exhibit, a person placing a hand on a special stand brings an immediate read-out of blood-flow velocity and heart dimensions and the individual's electrocardiogram is projected on a screen.

X-ray astronomy, applications of space photography, microbial studies, and atmospheric, space-science, and interplanetary experiments by U.S. universities and colleges under NASA research grants are also featured, as are the latest innovations in the home, transportation, and construction. And there is more. Much, much more.

And it is all available to visitors to Kennedy Space Center until September 7, the final day of this bicentennial exposition on science and technology. Tickets are priced at $3 for adults, $2 for youths 12-18, and $1 for children 3-11. Guided bus tours of KSC and adjacent Cape Canaveral Air Force Station will continue from KSC's visitors information center during the exposition.

Here's a chance to get a look at "Third Century America." It's yours and your children's...and Grumman will play a vital part in it. So if you're in the vicinity of Kennedy Space Center, don't pass it up.

people

High flying Lizards

Put a few "Green Lizards" together and what have you got? In this case, high flyers with almost 15,000 flight hours in the A-6 Intruder. Being congratulated by Widbey Island Grumman rep Bob McNeil are (front L to R) Cdr. Bob EcEwen, McNeil, Cdr. Jerry Rogers, and Lt. Cdr. Jerry Smith—all with more than 2,000 hours. The second row of Marine crewmen, all with between 1,100 and 1,600 hours are (L to R) Lt. Cdr. Dave Everett, Lt. Jim Dickey, Lt. Cdr. John O'Brien, Lt. Gene Porter and Lt. Cdr. Roy Adair. Two other 1,000-hour flyers not pictured are Lt. Cdr. Butch Engwell and Lt. Gary Wright.

Sterling performance

Approximately 100 Grummanites and their families attended Plant 58's open house recently. Following a tour of the facility, members of the Grumman family feasted on good ole Yankee hot dogs and soda. Later, they congregated at the softball diamond for the afternoon. The Grumman Tomcats, Sterling's varsity squad, took on a team comprised of fellow employees and family members in a doubleheader. The Tomcats won both games, but everyone had a good time cheering for their favorites.

Appointments

The following are those who recently received changes in assignments: DEPARTMENTAL OPERATIONS—in the Engineering Department, Reed Bradley, currently section head will also assume responsibility as project engineer for Product Definition System (PDS); and in Integrated Logistics, Lawrence Kollender, Deputy Support Program Manager, E-2 ILS/Fleet Introduction; James Reed, Support Program Manager, E-2C ILS/Fleet Introduction; and George Tomlinson, site manager, Naval Air Station, responsible for all matters at NAS Norfolk; MANUFACTURING—Fred Trusnovec, foreman, Instrumentation Test, Plant 6.

Mark of distinction

Chief Warrant Officer Don Diederich (R) an instructor bombardier/navigator deployed with VMA(AW)-332 at the Naval Air Station, Fallon, recently passed the 2,000-hour milestone in his A-6 Intruder flying career after a weapons training mission. Grumman rep Tom Calisto (L) offered his congratulations, and later presented Don the coveted 2,000-hour plaque.

Massive construction program smoothes telephone service

Those recent traffic jams on Old Country Road and South Oyster Bay Road (when automobiles were funneled into one lane) are gone now, but bcause of them Grumman's Bethpage telephone service will be a lot smoother in the days ahead.

According to New York Telephone, those excavations were necessary to lay the telephone cable from their new central office building in Plainview to Bethpage and for them to provide new and expanded Centrex service to Grumman Aerospace beginning December 18.

The switching elements that actually process the calls, the memory banks and central control unit for the electronic switching system, which includes the new Centrex service, are located on telephone company premises in Plainview. Only two cabinets for control of operator consoles are at Grumman.

The new Centrex service that can be modified or expanded to meet the changing needs of Grumman is the result of a massive construction job by the phone company. Among the work that needed to be done to provide Centrex was the installation of several hundred "frames" of equipment that switch each individual call in a newly-constructed two-story telephone building in Plainview.

The excavations had to be made from the new Plainview office to the Bethpage complex, in addition to relocating other facilities, and more than five miles of conduit to carry the cables had to be placed. It took about 100 work days simply to place the necessary amount of cable.

About 25 miles of cable were required to tie the entire job together, including the main trunk cables that go between telephone offices as well as the subscriber cable that goes from Grumman premises to the trunk cables.

Within the cables are 7,800 pair of wires that had to be spliced together to provide a continuous connection so that calls can be processed. It is estimated about 6,000 work hours were needed to splice the wires.

Testing still is going on within the central office as equipment is added. The cables also must be checked to ensure that pressurization is kept at optimum levels to prevent leaks that permit dampness to create potential service problems. Computers monitor and maintain the cables and alert repair crews should trouble arise.

So the next time you pick up your phone to dial a number, think back to the times you were stuck in those long traffic jams, and say to yourself, "Maybe it was worth the trouble after all."

Sunbathers beware

If you are a lover of sunbathing, or expect to be spending many burning hours in the sun—whatever the reason—it might benefit you to take into consideration the following precautions, now that summer is upon us.

Avoid too much exposure to direct sunlight, and overexertion—especially in the early part of a heat wave. Wear light, porous, and loosefitting clothing. Increase the use of salt in the food you eat. If hot outside, take salt tablets. Drink plenty of water and fruit juices, avoiding ice and alcohol. Eat nutritious foods but, don't overeat, and include fresh fruit on the menu. Get plenty of rest. When sunbathing, have someone with you to decrease the possibility of falling asleep.

letters

On May 31, 1976 the Veterans Educational benefits were terminated. This action effects some 3.7 million veterans, many of whom are currently enrolled in schools and colleges. Congress has approximately 65 bills in committee which would benefit veterans. Our representatives do not act unless they hear from the voters.

We are asking everyone to write their Senators and representatives in the House to act on some of these bills, especially the "EGAN Bill #HR 14142" which would extend the educational benefits.

Hopefully everyone will be in favor of extending these benefits, even if you're not, write in and be heard. The following is an example of a favorable letter and it is hoped that it will reach many Congressmen.

It is with great urgency that I request your assistance in extending the educational benefits under the Veterans Educational Assistance Program.

With the recent cessation of these benefits, many people will be unable to attain their educational goals. In todays environment, education is not just one asset, but a national commodity which must be allowed to continue.

Your sponsorship, co-sponsorship, and/or support of legislation to extend the educational benefits; such as, the "EGAN Bill #HR 14142" or any other similar legislation would be greatly appreciated.

Robert Carlson
NAVPRO

Tête á tête. Prior to returning to France, Dassault flight test manager Jean Robert (L) and pilot Hervé Leprince-Ringuet (2nd L) discuss the Falcon 10's new thrust reversers with Bob Smyth, Grumman Flight Test Department director, and Don Maresca (R), program manager–Operations, Thurst Reverser and Nacelle Systems. (Photo by Gerry Costello)

Prep thrust reverser for FAA flight exam

For the past several weeks at Calverton, the Dassault Falcon-10 business jet, equipped with its new Grumman thrust reversers, has been undergoing a gamut of tests in preparation for Federal Aviation Agency (FAA) certification.

When the new thrust reversers for the Falcon-10 receive the stamp-of-approval from the FAA, it will mark another milestone for the company's efforts in this commercial market.

Thrust reversers, installed to the rear of a jet engine's aft nacelle (casing) are used to reverse jet thrust to achieve more rapid braking during landings. They can also be employed as a safety factor for landing on wet and icy runways, short airstrips, and aborted take-offs, says Don Maresca, program manager, Operations, Nacelle & Thrust Reverser Systems.

With its proven expertise in airframe technology and power plant design, the company entered the commercial market of thrust reversers and nacelles four years ago. Thus far, all contract awards have been for small business jets powered by the Garrett TFE-731 fan-jet engines. In addition to Dassault Falcon, the following aircraft are being equipped with Grumman-built thrust reversers/nacelles:

- Israel Aircraft Industries (IAI) Westwind 124 business jet;
- Hawker Siddely HS-125 small business jet;
- Gates Learjet models 35/36.

Dassault's Falcon-10 flight test manager Jean Robert and test pilot Hervé Leprince-Ringuet recently visited Calverton Operations to test the Falcon-10's new thrust reversers. According to Bob Smyth, director of GAC's Flight Test Department, the Falcon-10 successfully completed flight and structural verification tests which included opening the thrust reversers at 40,000-foot altitude to demonstrate that the aircraft is controllable should the thrust reversers inadvertently deploy during normal flight. Tests currently being run are landings on wet and dry runways and engine vibration surveys. Completion of the FAA flight test segment by FAA pilots is slated for mid-July.

In addition to producing one prototype and 24 production thrust reversers for the Falcon-10, Grumman also manufactures Falcon-10 engine nacelles. Thus far, 110 ship-sets of nacelles have been produced at Plant 77, manufacturing center for Grumman's thrust reverser and nacelle programs. Once the Falcon-10's thrust reversers receive FAA certification, Stuart Operations will be delivering two to three sets a month to Falcon Jet Corporation in Teterboro, N.J., for retro-fitting their Falcon-10.

Navy lauds E-2C restoration by Grumman as "exceptional"

After a number of take offs and landings, during a night training flight, a Naval pilot being checked out in handling an E-2C, made a "wheels up" landing. The plane slid over 2,000 feet down the runway and came to rest in flames. Both the pilot and instructor were uninjured.

Vice President, Tom Guarino, Grumman E-2C program director, says the Navy was divided on what to do with the E-2C. Some were in favor of striking the craft because of its extensive damage. Others, notably Captain Frank Roth, E-2C program manager, Naval Air Systems Command, persisted in the belief that the aircraft could, and should, be restored. The decision was based on maintaining the highest number of active E-2C's in the fleet and on Grumman's ability to restore the craft with minimal cost and schedule problems.

Last month a Naval review team evaluated the repair job of the E-2C—the largest and most extensive restoration ever undertaken on a plane by Grumman Aerospace. Don Persons of the E-2C program office, Naval Air Systems Command, sent the following memorandum in reference to the repaired craft (shop number A-3):

"The A-3 restoration progress was assessed by representatives from Commander Naval Air Force, Atlantic Fleet; Naval Air Rework Facility, North Island, Ca.; Naval Air Test Center, Patuxent River, Md.; Naval Weapons Engineering System Activity; and Naval Air Systems Command on 11-12 May 1976.

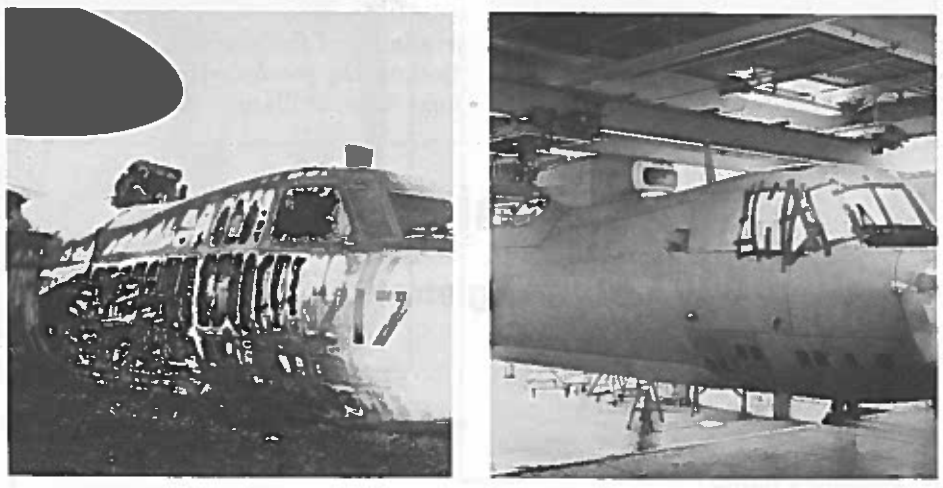
"The combined opinion of all representatives was that Grumman personnel have performed the work to date in a superb manner.

"Our personal thanks go to the people in the various plants that have contributed to the accomplishment of this exceptional challenge. Keep up the good work."

Persons' sent his memorandum after a Naval review team inspected the repaired fuselage and center section at Bethpage and Garden City. Noting the high quality of restoration, the team concluded that E-2C No. 3 should be returned to active duty as a "zero time" aircraft as opposed to a repaired aircraft. The venture, according to Persons, marked a significant accomplishment for the GAC/Navy team involved in restoring the extensively damaged E-2C.

Repairs made on No. 3 according to Rose, had to pass the same stringent quality requirements imposed on new production craft. At no time was there any "make do" approach to problems. Every drilled-out rivet hole was examined by Quality Control to guarantee production standards for the restoration. "Our repair work is not only a top notch job," says Rose, "but it's moving at a record pace. The A-3 will be delivered in less than 15 months—approximately half the time required for a new aircraft.

"The whole project proves once again that Grumman has the capability to take on a complex job and do it with top notch workmanship, on time, and within cost. Teamwork between engineering, quality control, manufacturing, material management, foremen and individual workers who volunteered numerous repair recommendations, made this possible. Finally, a major stimulus to the success of this exceptional challenge was our Pride of Workmanship program."



Before and after. (L) Starboard side of burned E-2C fuselage is seen after wheels-up landing and skidding 2,000 feet before bursting into flames. Restored hull is at Plant 36, Garden City, where stabilizer, pylon, and new hydraulic systems were also repaired and installed. Final assembly of the completely restored airplane will begin at Plant 4 in July.

A-6E TRAM trials ending as Intruder shows muscle

Two pilot production A-6E TRAM Intruder aircraft are nearing the end of their technical and operational tests and evaluation trials at the Patuxent River Naval Air Test Center (NATC), Maryland. The A-6E features a target recognition attack multisensor (TRAM) which enhances its all weather attack capabilities. TRAM combines Hughes Aircraft infrared and laser sensors with multimode-radar target-identification tracking and ranging, under any combination of lighting and weather conditions, with greater accuracy than before. The system provides the bombardier-navigator (BN) with a television-type picture of a target, regardless of whether it can be seen by the naked eye or picked up on radar.

According to Tom Zehner, assistant to Bill Trillo, A-6 program director, "When the technical and operational improvements of the two pilot production aircraft (numbers 55E and 57E) are finally proven out, a favorable report will mean a substantial program for Grumman and Hughes. This includes production, updating other A-6s, and support equipment."

The TRAM technical evaluation is being conducted by the Strike Branch of NATC under project officer LT. Dave Anderson. Bob Smith, lead engineer for the Strike Branch says that 66 percent of the essential testing on aircraft number 55E has been completed. Similar tests will be run on 57E but should not take the same amount of time, says Smith, unless an unexpected problem arises. So far, he states, "55E appears to be meeting or approaching the majority of its objectives."

Technical evaluation includes such areas as:

- electro magnetic compatibility—whether there is interference between one electronic system and another on the aircraft
- human factors—crew interference due to improper cockpit lighting or badly placed switches and controls
- forward looking infrared (FLIR) range performance, stabilization, and tracking—capability of the FLIR to distinguish small temperature differences and clearly resolve the shape of real-life forms
- laser beam—whether laser power output meets specifications and whether it points accurately, which depends on how the laser is boresighted to the infrared set
- overall system performance—assessed by weapon delivery accuracy flights using conventional and laser guided weapons.

After 28 flights, Lt. Cdr. Dick Fellows, VX-5 TRAM project officer, says 80 percent of the operational assessment of 55E and 57E has been completed. Tests, he says were conducted in a realistic environment that included weapons dropped against armored personnel carriers, camouflaged bunkers, and remotely controlled speed boats to test bombing accuracy. Low-level navigation, land-and-sea and night-and-day target identification, and close air support with ground troops by the TRAM Intruder were analyzed for their performance.

Performance capability for the A-6E is outstanding. It is the only all-weather, electro-optical attack aircraft in the world. As its radar pierces the night and bad weather, the attack system allows the BN to shift from radar tracking to the forward looking infrared system (FLIR) that makes the target visible on his television screen. When it is sighted in the electronic cross-hairs of the picture, the BN aims a laser light beam at the mark. This provides a pathway for a laser sensing bomb to the target.

The FLIR part of the TRAM system gives the BN a television picture of targets. "Picture quality is so sharp," says Zehner, "that a real life black and white television picture, regardless of night or day conditions, is presented to the BN. A ship can be seen on the blackest of nights or an oil depot can be spotted on land with the amount of fuel in each tank clearly visible. A target is seen because of the heat generated by it, and the temperature differences in each part of the target provide its identifying form." Electro-optical equipment aboard the A-6E allows delivery of laser guided weapons 10 times more accurately than delivery of conventional weapons.

According to Zehner, the TRAM weapon system also enables the Intruder to launch a television-guided Condor missile from a distance of almost 70 miles. Once the Condor has been fired, the aircraft can break off the attacking run and escape while the missile navigates its way to the target area, at which time the BN takes over control for final guidance to impact.

As dazzling as the attack capability of the A-6E is, it scores high in another area that is important in these days of budget awareness—reliability and maintainability. Zehner says that installation of up-to-date avionics in the craft greatly increases reliability to better than 90 percent probability of trouble-free operation during a typical two-hour mission. Maintainability of the weapon system is also improved by the addition of built-in test equipment (BITE) which greatly reduces maintenance man-hours per flight hour.

As the Grumman A-6E TRAM moves into the final stage of Navy testing, it is evident, says Bill Trillo, A-6 program director, that the Navy is favorably impressed and all indications point to a positive recommendation, probably in August, to produce the TRAM system for fleet use.

Working together, Vinnie Lattuca, (3rd L) GAC team leader of A-6 support team at Patuxent River with Grumman, Hughes Aircraft, and Navy personnel. (Standing L to R) Gary Aldredge, GAC; Diethard Linder, HAC rep; Lattuca; Bob Smith, Attach Branch; Lt. Dave Anderson, Project Officer; Dan Larsen, HAC rep; Herman Mack; GAC rep; Clark Dalton, GAC; and Pete Rosato, GAC. (Front row L to R) Ed Shiseng, GAC; Maj. Bob Newsom, Attack Branch pilot; L. Cdr. O.P. Burch, EWSR Branch head; Mark Borelli GAC; Lt. Tod Cleland, Attack Branch B/N; and Bill McCluskey, GAC.

Make plans for the 17th, '76

Remember the date—July 17, '76—a good year to start a country, and a great day for Grumman employees and their families to attend the annual Grumman Family Picnic.

In keeping with the Bicentennial spirit sweeping the country, Charles Fuschillo, director of Employee Services, is having the Calverton picnic grounds spruced up in traditional red, white and blue, and has arranged for special entertainment to be provided by the Minute Men Drum Corps of Long Island.

The sound of fife and drums will mingle with the smells of cooking hot dogs, the aroma of beer, soda, ice cream, and the screams of excited children enjoying any of the number of rides and events scheduled for them throughout the day.

And for those parents that may be younger at heart than in body, there will be special contests and dancing throughout the day to the Grumman Employee Band. Or you can just sit back and relax in the congenial atmosphere, surrounded by friends.

You and your family can enjoy this fun day in the sun by just heading down to the nearest ESO and picking up your tickets to the event that has been pleasing tens of thousands of Grummanites for over forty years. Adult admission is $3 per person, and children under 12 are admitted free. No tickets will be available at the gate. More information on the picnic will appear in the next issue of Plane News.

Picnic Junior Gloves

Entry registration

Entrant's name .....

Age ..... Weight .....

Sponsor's name .....

Dept. ..... Plant ..... Ext. .....

Entries are to be forwarded to John Koloksi
Plant 1 Employee Services Office

Underlining 'teamwork' spells Plant 2 success

Getting it all together is almost always a challenge, especially at Plant 2 where some five million detail parts are manufactured each year in 60 major work centers by some 1,500 people. Detail parts are made from steel, titanium, aluminum, and copper that are cut, stretched, bent, heated, and acid-formed into the hundreds of brackets, angles, templates, tubing, and curved forms that eventually make the wings, fuselage, rudder, or nacelles of many Grumman aircraft. If this sounds momentous, it is. Frank Leone, assistant to Frank Messina, director of Manufacturing, says, "What we're getting together here is a successful venture. We know we're doing all right because we're meeting our schedules and with less defects and rework. This means we're producing quality work the first time around—and that's what keeps costs down.

"Our success is important because it makes it possible for the company to be competitive in the marketplace. Teamwork between Bethpage manufacturing, plant management, and all of the people on the day and night shifts is responsible for much of the success at Plant 2." As an example of that teamwork he referred to the people in the electron beam welding department.

Major cost saving

Electron beam welding, under production manager Jim Gillis, has saved a significant number of manufacturing-hours on lot number eight of the F-14 production schedule. Lot eight involves the manufacture of the wing center section and wing panels of 86 Tomcats. Gillis says, "When you save work-hours under the estimated amount to do a job, you're providing a major cost saving and at the same time delivering planes according to specifications—and that means top quality."

Gillis also says that the savings were effected by manufacturing techniques developed in the department that reduce the time required for rewelding and machining of parts in the wing center section. "Our team has all of the people it needs to take care of any welding or machine problems and their only responsibility is to EB welding," says Gillis. "We have a full team that includes quality control, material and processes, liaison, manufacturing, material management, production, and planning. They all home-in on one idea—doing the best for the department."

This kind of teamwork also makes it possible for foremen to get their work done, he says. They are the pivotal people who move production along but they can only do it with close support.

North plating facility

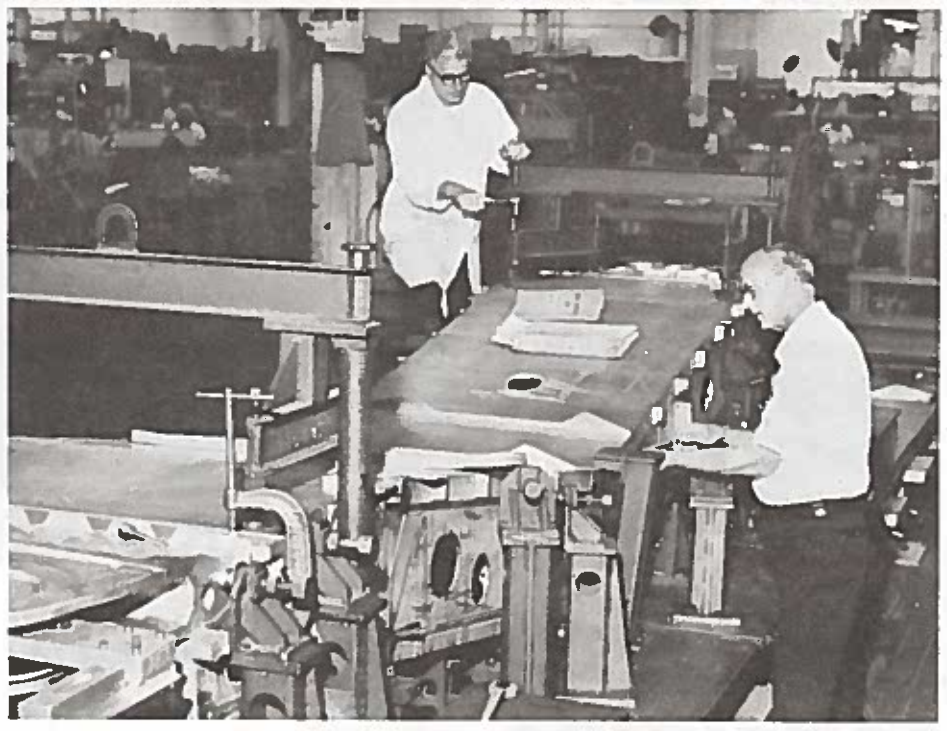
"Teamwork is not only an important key to production success," says Ed Barron, staff assistant to Frank Messina, "it's also vital to plant success." The north plating facility in Plant 2, which until recently did copper and cadmium plating of steel parts using acids and caustic solutions, needed an updating. The cost for the changes at Plant 2 was estimated at $750,000. What we did was form a team to decide whether we should go through with the updating or find a better way to do the job.

"We got people together from the fixed assets committee, manufacturing materials and processes, facilities maintenance and engineering, methods, and safety. They all looked at the job with this question in mind: What's the quickest, safest, and most cost-effective method of doing the metal plating job?

"We found that cadmium plating was already being done in Plant 3 by a non-chemical process, so we moved the job over there and got rid of the cyanide tanks here. We also discovered copper plating could be done by a 'no-carbon' method in Plant 2 that is easier and quicker than acid. Now we don't need that facility nor do we have to spend three-quarters of a million dollars."

Other teams made up of people from the Bethpage manufacturing office and Plant 2 manager John Schneider's staff are now working on a demonstration and pilot program using numerically-controlled routing.

"We find that teamwork *at all levels* is the key to success in Plant 2." says Leone. "The whole back-up team of supporting and manufacturing management is here to assist the foreman to get the job done. They tell us their ideas and we support them because they're on the floor doing the job. Working together is the way to get high quality work and keep costs down. That's the way we win in the marketplace."



Fitting cover. John Gianni (L) and Al Mielczarski check fit of titanium top cover for F-14 wing center section that is lined up for precision welding at electron beam weld department. (Photos by Bob Settles)

Pattern cutter. Donnie Moore hand routes metal skin according to fixed pattern for wing section of F-14 in Plant 2 router room.

Tube shaper. Bob Lanning operates numerically controlled tube bending machine to form hydraulic line of landing brake on F-14.

calendar

Aikido Club: every Mon. & Wed., 5:15 p.m., Pl. 35 cafe; guests welcome. Bob Bauman, x3886.

Alcoholics Anonymous: every Mon., 5 p.m., Pl. 39, classroom 1; closed meetings. Personnel Relations, x3521; *Calverton:* every Mon. 4-5 p.m., Pl. 8 trailer.

Amateur Radio Club: June 26-27, 10 a.m., McKay Field; ARRL annual field day; all GRU hams & amateur radio enthusiasts welcome. John Courtney, x2536.

Chess Club: every Tues., 5 p.m., Pl. 30 cafe; guests welcome. Pat Charovkine, x9387.

Coin Club (Bethpage): Wed., June 30, 12:05 p.m., Pl. 25 vendor conference rooms; informal lunchtime meeting. Ken Hale, x3717.

Coin Club (Calverton): every Fri., 1st lunch period, instrumentation conference room, Pl. 6; guests welcome.

Duplicate Bridge Club: every Thurs., 6 p.m., Pl. 30 cafe; open competition; guests welcome. Hugh Montague, x3863.

Fencing Club: every Mon., 4:30-6:00 p.m., Pl. 30 cafe. George Kegney, x86048.

Grumman Dance Club: every Thurs., 5-8 p.m., Pl. 28 auditorium, hustle lessons; all welcome.

Grumman Family Campers: July 3-5, Great River facility; by reservation only. Charles Holzer, x3585.

Grumman Model Railroad Society: every Wed., 5:30-9:30 p.m., Model RR Bldg. (at Pl. 3 rr crossing); regular meeting; guests welcome. Ray Muntz x86101.

Grumman Scuba Divers Club: Wed., June 30, 5 p.m., Pl. 28 auditorium; regular monthly meeting; all welcome. Cindy Schlicter, x6120.

Grumman Toastmasters Club: Wed., June 30, 5 p.m., Pl. 25 conference room 1C; local chapter; regular meeting; guests welcome. Tom Smith, x87360.

Karate Club: every Mon., Tues., & Thurs., 5:30 p.m., Pl. 35 cafe; building character thru physical exercise & self-defense; guests welcome. Hy Dreksler, x86812.

Rod & Gun Club: every Mon., 4:30-9:30 p.m., NYS Armory, Riverhead; 1st & 3rd Mon., 8-10 p.m., Naval Reserve Training Center, Huntington; every Tues., 6-8 p.m., Colonial Firearms, Levittown; every Thurs., 6-10 p.m., Old Bethpage Club Range, W. Babylon; every Fri., 6-8:30 p.m., Marine HQ Range, Garden City; practice & matches; open to all Grummanites. Call GAA for information.

Stamp Club: first 3 Wed. of each month, 5 p.m., Pl. 30 cafe. Steve Hoops, x3926.

C. Blahato

K. Wendell

A. Faga

R. Cozzette

A. Neuman

P. A. Lieb

J. C. Czugh

G. Urzi

R. J. Vignola

T. P. Piccolo

J. A. Boltuc

A. Bornscheur

J. A. Kerwin

F. R. Noon

L. H. Schmidt

J. M. Dukarm

S. Orella

E. M. Reardon

service milestones

35

John Malanczuk, Sub-Assy. (1)
Charles A. Whitson, Veh. Liaison Engg. (1)
Anthony J. Ceraso, Steel Pts. Assy. (2)
Leon Polkowsky, Prod. Ctl-Pts. Cntl. (2)
Joseph Shattes Jr., Floor Space (2)
Arthur J. Richards, Templates (2)
Edward G. Clark, Engg. Mgrs. (4)
Joseph Baumann Jr., Support Equip. Prod. (5)
Gustave C. Herold, Prod. Cntl. (6)
Francis Laurita, Hydraulics (14)
Arthur P. Giovagnoli, GSE Sched. (15)
Alfred Van Wymersch, Cntls. & Mechanisms (25)
John M. Coe, Static & Fatigue Test (25)
Edward J. Schlott, Prod. Pl.—Mgmt. & Stf. (36)

30

Henry O. Grack, Config. Data Mfmt. (40)
Lawrence M. Meade Jr., Senior V.P.—GAC (35)

Richard A. Kennard, Mach. Oper—Pts. Cntl. (1)
Warren C. Shepherd, Prod. Ctl-Pts. Cntl. (1)
Charles Evers Jr., Prod. Release & Analy. (1)
Harold T. Johnson, Veh. Liaison Engg. (1)
Frederick H. Dorfmeister, GSE Mech. (2)
Herbert J. Tutrone, Dets. & Subs. Fab. Mgt. (2)
Ralph Haberthur, Chem. Mill (3)
Alexander D. Murphy, Final Assy. Struct. (4)
Joseph E. Grams, Support Equip. Prod. (5)
John C. Ohler, Bus. Plng. (5)
Arthur E. Sobisek, Prod. Mgmt. & Stf. (6)
Rocco D. Costantino, Mfg. Insp. Mech. (7)
George Pritting, Trans-Ops. (20)
Robert A. Snyder, Des. Engg. Mgmt. & Stf. (35)

25

Carl Blahato, Fuselage Joining (1)
Kenneth Wendell, Equip. Lines (1)
Edward P. Jolly, Heat Treat (2)
William J. Donovan, GSE Mech. (2)
John W. Sabisch, Prod. Ctl-Parts Cntl. (2)
Anthony Faga, Prod. Ctl-Parts Cntl. (2)
Robert Cozzette, Prod. Mfg. Budgets (2)
Alfred Neuman, Jigs & Fixtures (2)
Paul A. Lieb, Mach. Shop (2)
John C. Czugh, Jigs Detail & Sub-Assy. (2)
Guido Urzi, Alodine (3)
Rocco J. Vignola, Parts Paint (3)
Thomas P. Piccolo, Honeycomb Final (3)
Joseph A. Boltuc, Mfg. Tech. Prod. Serv. (3)
Aubrey Bornscheur, Insp-Mech. (3)
Joseph A. Kerwin, Static Test (5)
Franklin R. Noon, Mech. Struct. & Proto. (5)
Leonard H. Schmidt, Support Equip. Prod. (5)
John M. Dukarm, Prod. Plt.-Mgmt. & Stf. (5)
Saverio Orella, Mfg. Tech. Prod. Serv. (5)
Eugene M. Reardon, Presentation Serv. (5)
John S. Townson, Central Shipping Pkg. (17)
Joseph F. Oliveri, Plt. Protection (18)
William L. McDermott, Plt. Protection (18)
Raymond Repperger, Trans-Equip. Maint. (20)
Donna Demchuk, Mass Prop. Consol. & Control (25)
Nicholas S. Sinder, Prog. Mgt. Space (25)
Joseph A. Whelan Sr., Req. Plng. (30)
Joseph J. Montuori, QC Supplier (30)
Henry J. Powers, Power Plt. Des. (35)
Ralph B. Wittman, Stabil. & Control/Fly Qual. (35)
John K. Benz, Elect. & Elect. Des. Stf. (35)
Hans K. Hinz, Sys. Sciences (35)
Frank A. Jinglewski, Cent. Sect. Final (36)
Howard W. Brochyus, Trng. & Devel. (39)
Robert V. Johnson, ILS Site Supply Mgmt. (40)
Carl O. Lofgren, Power Plt. Des. (40)
Neil E. Morris, Req. Plng. (43)
Woodrow W. Wilkins, Maint-Rearrangement (44)
James L. Boyle, Elect. Sub-Assy. (77)

20

Charles Combs, Press (2)
Michael F. Kelly, Trans-Ops. (2)

J. F. Oliveri

W. L. McDermott

R. Repperger

D. Demchuk

N. S. Sinder

J. A. Whelan Sr.

J. J. Montuori

H. J. Powers

R. B. Wittman

J. K. Benz

H. K. Hinz

F. A. Jinglewski

H. W. Brochyus

R. V. Johnson

C. O. Lofgren

N. E. Morris

W. W. Wilkins

J. L. Boyle

John J. Knespler, Conv. Mach. (3)
Charles E. Heeger, Conv. Mach. (3)
Paul A. Hentschel, Mach. Oper.-Tech. Serv. (3)
Earle G. Sigerist, Instr. Plng. & Control (5)
Joseph O. Albanese, Insp-Mech. (5)
Raymond R. Russo, Prod. Deputy & Sta. Foreman (6)
Wallace M. Collins Jr., Ops. Software Devel. (14)
Stephen G. Norton, Sys. Engg. Proj. Engg. (15)
Catherine Smith, Central Shipping (17)
Barrett Whitman Jr., Struct, Analy. (25)
Ernest R. Ranalli, Struct. Analy. (25)
Richard H. Marshall, Advanced Space Sys. (25)
Jesse Combs Jr., Sub-Assy. Maj. (27)
Ronald W. Anders, Pers. Admin. (28)
Charles E. Lane, Audit Liaison (30)
Alan C. Mills, QC Supplier (30)
Ronald R. Chamberlin, Pubs. Proj. Mgmt. (34)
John J. Leoniak, Mech. Des. Stf. (35)
Russell H. Hagerman, Escape/Surv/Arm/Pyro/Sys. (35)
Herbert Watman, Aerodynamic Des. (35)
William L. Kelley, Admin. Ops. Mgmt. & Stf. (35)
Robert H. Lemke, ILS Mech. Engg/Des. (36)
Robert B. Nurnberger, Stabil. & Control/Fly Qual. (36)
Michael F. Baumgarten, Aerodynamic Des. (40)
Francis Schleider, Trng. Sys. History (43)
Roy G. Kandler, Elect. Final Assy. (43)
Edward A. Beacon Mach. Shop (60)
Richard E. Halsey, A/C Sys. Serv. (75)
Robert W. Welsch, Grumman Houston

15

Rene Valdes Jr., QC Supplier (30)
Pasquale J. Sciarratta, Tech. Writing (34)
Melvyn Rimer, Stabil. & Control/Fly Qual. (35)
Allen B. Pifko, Mat'ls. & Struct, Mech. (35)
Edward C. Walch, TS Cust. Trng. Instructor (39)
Richard R. Strollo, TS Cust. Trng. Instructor (39)
James F. Ross, Antennas & Radomes (40)
George F. Tomlinson Jr., Site Mgmt. (94)
Joseph H. Harrison III, Prod. Plt.—Mgmt. & Stf. (1)
Henry J. Huttenlocher Jr., Stabil. & Control Equip. (1)
Harold P. Clark, Support Equip. Prod. (5)
Seymour Mirchin, Presentation Serv. (5)
Richard Stinson Jr., Presentation Serv. (5)
Paul D. Clanton, Radar (5)
David B. Sullivan, Ops. Analy. (5)
Joan M. Groben, Resource Control—Mgmt. & Stf. (5)
Sherwin J. Kayne, Trng. & Devel. (6)
Vito R. LaRocca, Meas. Stnd. Lab. (6)
Evan G. Duane, Mission & Sys. Analy. (7)
Benedetto Colella, Mfg. Inspect. Elect. (7)
David J. Komlosy, ILS Site Support (15)
George G. Albright, Advanced Space Sys. (25)
Salvatore D. Torregrossa, M/T Equip. Engg. (30)
Bruce D. Abel, Process Engg. (30)

Mets tix on sale

The first Grumman Nite at Shea Stadium this season will be on Friday, July 30, when the N. Y. Mets take on the Philadelphia Phillies. Tickets are $3.50 each, and round-trip bus fare is also available for $2 apiece. You can purchase your admission to Grumman Nite Number One at the GAA office in Plant 30.

Great River wins award for high pride in work

The men and women of Plant 43 and 44 recently enabled the Great River facility to become the first of two responsibility centers to have achieved Pride of Workmanship Level 1 award status in all manufacturing departments.

Workmanship awards are given at Levels 1 through 3 for meeting 14 consecutive weeks of assigned target defect rates in manufacturing. At each Level, the requirements get tougher, and by Level 4, the challenge increases to meeting the requirements for 28 consecutive weeks. As noted on the certificates presented to all the Plant 43 and 44 manufacturing units, the awards are given "for consistent care and craftsmanship contributing to the delivery of an outstanding and high quality product to our customer."

During the presentation of awards to plant manufacturing directors and managers, Jay Klevanosky, Quality Control director for Great River, explained that all 47 manufacturing units have completed Level 1, and 29 of these units have already completed Level 2 of the program.

He also noted that since the inception of the Pride of Workmanship program there has been a constantly declining rate of rework in the two Grumman plants, characteristic of a trend in other Grumman plants as well.

President George Skurla instituted the Pride of Workmanship program in May, 1975, and selected Bill Voorhest, his special assistant, and Joe Kingfield, director of Operations Quality, to spearhead the drive.

"POW is a vital part of our business," explained Voorhest. "It is everyone's responsibility to do the very best job they possibly can, because our company's survival depends on fine workmanship. Throughout Grumman Aerospace, it's the people and their enthusiasm that help make this program work."

Shown receiving their awards above are (L to R) Ed Urban, Plant 43 deputy Manufacturing manager; Joe Walker, Great River Manufacturing director; Rudy Avitabile, Plant 43 Manufacturing manager; Bill Voorhest, Jay Klevanosky, Norman Reinertsen, Great River General Manager; Plant 44 Manufacturing manager Harry Fuhrmann, and his deputy, Ralph Aponte.

Also receiving awards, but not present for the picture, were Harry Ramberg, deputy Manufacturing manager of Great River; Plant 43 supervisors Nick D'Avanzo and Fred Schaeffler; Plant 44 supervisor George Adesso, and Shelly Schwartz, night shift manager.

Grumman Houston secures $400,000 support contract

The National Aeronautics and Space Administration has awarded Grumman Houstan Corp. a $400,000 contract for support of Shuttle Training Aircraft (STA). The three-year pact involves, "engineering, operations, modifications and maintenance of the STA aircraft, their ground support equipment, and other related activities as may be required..." at the various locations and test sites that NASA will utilize.

The STAs are specially modified Grumman Gulfstream II aircraft that will be used to simulate flight and landing features of the Shuttle Orbiter in training astronauts.

Grumman Houston, the Texas-based operation established in 1973 as a wholly-owned subsidiary of Grumman Aerospace, now employs 260 people. George Skurla is Chairman and Jack Buxton is President. Company activities include manufacturing electro-mechanical equipment for the aerospace, oil-gas, and petrochemical industries.

General manager Dave Lang says: "We consider this contract as an initial effort in our direct relations with the Johnson Space Center. It's Grumman Houston's first prime contract with the Center." Another key person in the program, Bob Tumilowicz, recently transferred from Bethpage to Houston to head the program, says it is expected that the new contract will enhance Grumman Houston's competitive position for contracts now in the works.

obituaries

OSCAR LECKENBUSCH JR. of Structures, Pl. 6, died May 26 at the age of 56. He had been with the company since 1964 and lived at 12 Homestead Circle, Hauppauge.

ROBERT MC GILL of Systems Sciences, Pl. 35, died May 25 at the age of 46. He had been with Grumman since 1954 and lived at 4 Heather Lane, Plainview.

IRENE A. KAUFMAN of Prog. Contracts, Pl. 1, died May 28 at the age of 60. She had been with Grumman since 1968 and lived at 32 Pine Dr., E. Northport.

JOHN J. COLTON of Property Accounting, Pl. 30, died May 29 at the age of 55. He had been with the company since 1960 and lived at 483 Elwood Rd., E. Northport.

KARL H. DOLLE of Electromagnetic Compatibility, Pl. 40, died June 6 at the age of 35. He had been with the company since 1974 and lived at 5 Ahlsey Lane, Centerport.

HENRY A. CAMPBELL of Support Equip. Prod., Pl. 5, died June 8 at the age of 59. He had been with Grumman since 1962 and lived at 22 London Rd., Syosset.

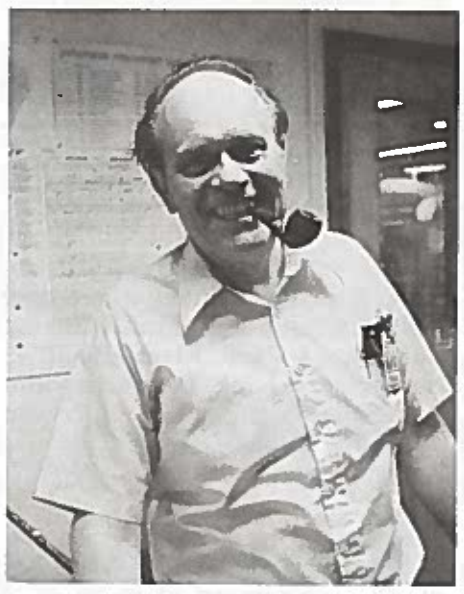
GRUMMAN plane news

Published twice a month for the employees of Grumman Aerospace Corporation, Bethpage, N.Y. 11714, as a function of the Public Affairs Dept., Vice President Sandy Jones, director.

Manager, Internal Communications
Brian Masterson
Managing Editor
James B. Conaway
Associate Editors
Kathy Housley
Charles McGowran
Editorial Assistant
Laura Solla
Reporter
Brian Ballweg
Telephone
Plane News: 3293
Plane News from outside line: 516-575-3293

what do you think?

Ever wonder what your supervisor looks for in you? Recently, Plane News went to Plant 2 in Bethpage and asked supervisors and foremen the question: What do you think are the qualities or traits that make up a good employee?



Henry Gerkens
foreman

An employee must be cooperative, not afraid to tackle any jobs, and his attendence must be good. I tell my men exactly what I think, I don't hold anything back. I try to be honest with them, and I think this has proven to be a factor, because I've had very good cooperation with the men. You have to treat everyone equal. If you treat them fair, they're going to treat you that way too. It's a two-way street.

Joe Grossman
foreman

A good employee must be conscientious. Frankly, I'd rather have someone who stays with the job and isn't quite as fast as the so-called 'hotshot.' We like a person to be here when needed, and one who does what's asked without complaining. Sometimes we don't have a particular job, and we ask them to do something else.

Morton Rochman
supervisor

When we have a new challange, such as a problem we are going through right now, people can step up to the challange and move out, without having to be told step by step which way to go. That tells me that they know their job, and they know what has to be done. We expect a fellow to know his job, and be able to run with the job at all times.

Harold Lessman
production manager

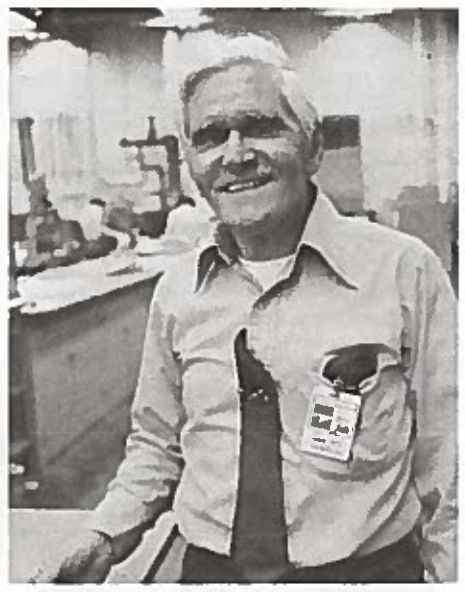
First of all, in the environment that we have here, a fellow has to be able to get along with everybody. Besides coming to work on time, having a good attitude, and wanting to get ahead, we like a guy who is always trying to take his boss' job.

Peter Giannott
supervisor

We like our people to be sincere, dedicated, hard working, cost and safety conscious—people willing to do a good job for the company. We'll be satisfied to train them to do any job we need them to do.

McKinley Banks
night foreman

First, an employee must have a motivation, and set personal goals to reach. Employees should look for ways to educate themselves in a particular field or job. We have kids fresh out of school, and those people that come to us from other companies. New employees can be taught our methods, and old employees bring experience with them—along with some ways that are better than ours, which work out very well.



Jim Fox
foreman

Intuition, motivation, and skill. Skill comes last, because you can always build the skill, or learn it. But you need the intuition, the will to know, and the motivation. You have to be 'gung ho,' interested in accomplishment.

William Wright
foreman

What I look for is a conscientious employee who is willing to work, has pride in his workmanship, and is looking to cut costs for the company. An employee also needs a good attendence record.

Credit Union

The Bethpage Credit Union office will begin an expansion program on June 23, 1976, to add a 75-foot extension to the rear of the main office. During the work period, expected to last three months, customary traffic and parking patterns will be changed. Cars will be able to enter the new parking lot on the east side (toward Plant 35) of the office from Stewart Avenue or from the entrance opposite the guard booth at Grumman Headquarters building.

Champ of Champs. Chet Baumgartner of GAA (C) presents Tournament of Champions' trophies to Woodbury Mixed bowling team members (L to R) Chris Christianson, Ruth Christianson, Norm Wright, and Pat Debbie.

Set annual GAA golf tourney for August 12 at Hampton C. C.

Are you ready for a challenging round of golf on a championship course where there are plenty of downhill and uphill lies, elevated greens, and threatening bunkers...and the neatly manicured rough is notorious for luring golf balls away from its owners? Then sign up now for the annual GAA golf championship and kickers' tournament, slated for Thursday, August 12, at the Hampton Country Club near Riverhead.

According to tourney director Mike Cherry, the field is limited to 144 golfers. He recommends that full payment of $16.50 accompany your reservations.

The cost for the day's outing includes greens' fee, buffet dinner with beer, trophies, and kickers' prizes. Individual trophies include those for low gross (first and second place), low net (first and second), longest drive and closest-to-pin. The awards will also include those for seniors (men over 50 years of age) and for women.

Competition for low-net trophies will be based on the Callaway System. Your Callaway handicap will also be used for the kickers' prizes. To be eligible for the kicker awards, a golfer after subtracting his or her handicap from the gross score must show a net score between 70 and 80: The prizes will be drawn following the competition.

Besides reminding all golfers of the limited field, Cherry also says you should try to sign up as foursomes. Golf carts for two are available—on a first call basis—for $12. The clubhouse dining room will be open for breakfast before the tourney's 10 a.m. shot-gun start.

Contact Cherry on Ext. 2133.

Register now for Pinehurst no. 2

A slot in the Mixed Pinehurst tourneys is a precisous item this year. According to tourney director Mike Cherry, he had to turn away many twosomes from the first tournament held on June 23. If you wish to play in the next Pinehurst set for July 21 on the Bethpage Blue course, your $6 (per person) fee must be paid at the time of your registration. The field is limited to 60 golfers, so sign up—and pay up—early. Contact Mike on Ext. 2133 for more info.

Sky's limit in GACE flying club

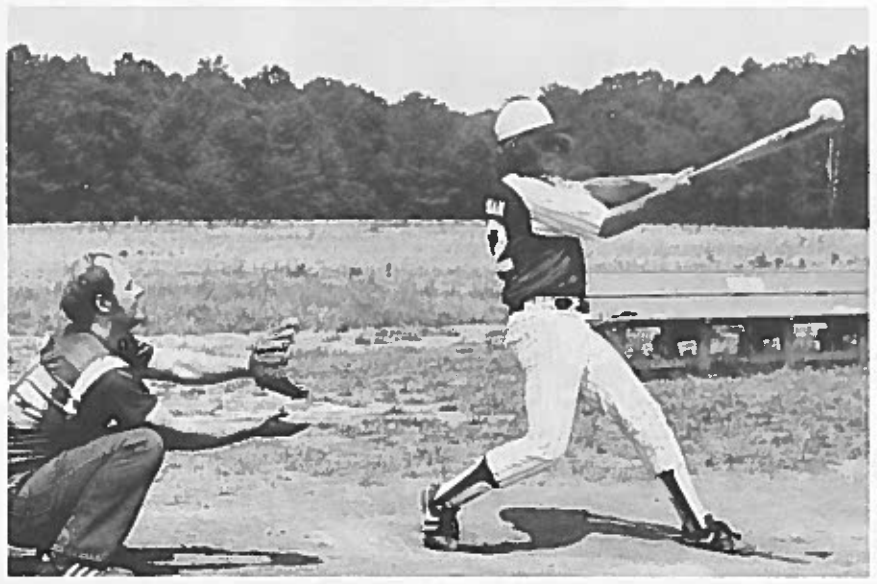
The GACE (Grumman Aerospace Corporation Employees) Flying Club, one of the largest nonprofit flying clubs in the country, is open to all Grumman employees and their families.

Certified by the FAA Air Agency, the club offers both ground and flight schools. Ground school courses include: private, commercial, instrument, pinch hitter, stall-spin clinic, and other specialized programs. The flight school offers: private, commercial, instrument, airline transport pilot, pinch hitter, and stall-spin clinic.

From its inception in 1965 until the purchase of its own aircraft in March 1970, the club rented aircraft. Today, it owns and operates eight late-model two- and four-place airplanes which are based at Islip MacArthur Airport. The club's instrument simulator is based in Plant 12, Bethpage.

The club holds monthly membership meetings on the second Friday of each month in the Plant 28 auditorium at 5 p.m. Guests are always welcome. Contact club secretary Larry Hahn on Ext. 1916 for further information.

Sterling Tomcats blast opponents off diamond



There is little doubt that the Plant 58 softball varsity is a powerful offensive machine. In the first three games of the season, the Sterling, Va., Tomcats outscored its opponents, 73-11.

At the first outing, pitcher Bob Sines survived a rather shaky first inning in which Xerox knocked in five runs. But Sines settled down and only allowed one more runner to cross the plate. In the 27-6 victory, Dick McMillan blasted a home run over the center field fence to pace the Tomcat attack.

While playing host to the Loudoun Raiders, the Tomcats had a field day. Bob Sines chalked up his second victory of the season by pitching a 41-3 game. Fred Grove went seven-for-seven at the plate which included a home run. Karol Hill and Rick Leggett both were six-for-seven.

In its latest diamond contest, the Tomcats had its closest call of the young season. They squeeked by the Steelers, 5-4. The victory was sweet because the Steelers had beaten the Tomcats twice during pre-season practice games. The hero of the contest was Fred Grove who hit a home run in the sixth with one man on, thus providing the winning margin.

As the *Sterling Echo* newsletter proclaimed: "Move over, Big Red Machine!"

Swingtime. Mike Cherry of GAA reports that over 100 golf enthusiasts attended the two-day golf clinic sponsored by GAA. Mike, who's a member of P.G.A. and an instructor for over 20 years, was assisted by members of the Grumman varsity. (Photo by Rich Breunig)

Fake disaster at Plant 3 proves firefighters ready

On Sunday, June 6, many motorists cruising down South Oyster Bay Road couldn't help but do a little rubbernecking. A traffic jam developed as many stopped along the roadside to get a better view. From outside the fence, it looked as if a grave disaster had occurred. Ambulances rushed in and out of the main gate carrying "victims." Water streamed full force from the fire apparatus that surrounded Plant 3.

"Did the plant explode?...How many people were injured?" Plant Protection guards spent most of the morning reassuring the passersby that it was only a fire drill.

Lt. Ed Stephens of Fire Protection reports that the "drill" was a successful team effort on the part of the local volunteer fire departments. Approximately every three years, the local departments utilize the Grumman facility to practice handling fire emergencies in a manufacturing setting. "And, it also provides the fire-protection branch of Plant Protection with information on how well our water pumps on the property are functioning," says Vinny Palmese of Fire Protection.

This year's "disaster" was organized by Grummanite Jimmy Emken, a chief in the Bethpage Volunteer Fire Department. The entire L.I. 9th Battalion was represented, including all Bethpage fire houses—Levittown (100-ft. aerial ladder); Hicksville (1,000-gal. pumper, and rescue van); Plainview (85-ft. aerial platform, 1,500-gal. pumper, and an ambulance); Farmingdale (1,000-gal. pumper); South Farmingdale (1,000-gal. pumper); Westbury (85-ft. aerial platform truck); Jericho (1,500-gal. pumper and rescue van); and Carle Place (1,000-gal. pumper).

In addition to pumping water for one hour at 10,000 gallons per minute, there was also a command center and a field hospital to tend to the "victims," who were played by firefighters children.

Though only a theatrical disaster occurred at Plant 3 on June 6, it's good to know the local volunteer fire departments are a vital asset to the Grumman community.

Telephone change

As of July 1, Field Base Administration will have its telephone number changed to Ext. 7444. John Marshall, the director, will have his extension changed to 2193.

'Rattlesnake' brig plays historic role in Ops Sail

It takes only a few minutes conversing with Harry Dolan before you, too, yearn to sail before the mast. In his off-hours, Dolan, a 21-year veteran on the Plant Protection force, becomes the proud captain of the 40-ton, 72-foot brig, *Rattlesnake*.

The maritime and naval war buff first dreamed of building a brig while serving in the U.S. Navy during WWII. For most of his life, the seafaring Grummanite has been at the helm of various-sized sailing vessels, but three years ago, his dream became a reality when he designed and built a revolutionary period ship.

"Her lines were taken from the actual revolutionary war sloop ship *Rattlesnake*. She served as a privateer during the 1770's, and was eventually captured by the British." Today's *Rattlesnake* is a typical small brig of that period.

The similarities do not stop there. The captain operates her just like the privateer captain on the predecessor ship 200 years ago. The ship's routine follows the same format as that on 18th century vessels. Visitors welcomed onboard are treated to the same hard tack (hard biscuits made of flour and water) as on the menu two centuries ago. Dolan has not foregone all 20th century pleasures, though. The brig which sleeps 14 also sports three heads, freezer, refrigerator, and hot-and-cold running water.

In this year of our nation's 200th anniversary, Captain Dolan and his crew are having no trouble filling the ship's log..."She has already visited many boating localities from Maine to the Virginia Cape to assist in bicentennial celebrations."

Her homeport is Cutchogue Harbor on Long Island's north fork, but you will be able to view this majestic sailing vessel and scores of other tall ships on the Long Island Sound, July 2. That's two days before Operation Sail—the bicentennial celebration when sailing ships from around the world mark the nation's birthday in a great parade up the Hudson River on July 4. And, the *Rattlesnake* is worth your viewing. "She is one of the few, if not *only*, revolutionary period vessels participating in Operation Sail," believes Dolan.

On July 2, Capt. Dolan will moor *Rattlesnake* in Sea Cliff Harbor. All her crew will be donned in period clothing including the captain, his wife Barbara who serves as the brig's cook, his 13-year-old son Keith, who serves as bosun (before the mast three years) and first officer, David Cordaro, son of Sal Cordaro, Plant 7 Flight Test.

Look for the 'Rattlesnake' brig skippered by Harry Dolan on July 2 in the Sea Cliff Harbor.

You'll be able to identify this historic replica by squared yards on both masts, three headsails, gunports which occasionally open to fire cannons...and her proud skipper on the quarterdeck.

GRUMMAN plane news

ADDRESS CORRECTION REQUESTED

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